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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,074	01/25/2001	Colin l'Anson	30001736US	4695

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Paul D. Greeley
c/o Ohlandt, Greeley, Ruggiero & Perle
Suite 903
One Landmark Square
Stamford, CT 06901

EXAMINER

PEREZ, ANGELICA

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/770,074

Applicant(s)

I'ANSON, COLIN

Examiner

Angelica M. Perez

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 25 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: On page 5, line 21, it should read by "a" corresponding...instead of "an"; on line 5 of page 10, it should read: "identity" instead of "identify". On page 7, line 3, elements "67" should be elements "68" according to figure 3. Also, on page 10, line 10 and 11, Internet "35" should be "39" according to picture 2. The period that appears at the beginning of line 11, on page 10, should be erased. Appropriate corrections are required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Is the limitation of claim 21 referring to a "method" or an "apparatus"? If the claim refers to a method; then, limitation (ii) should be rewritten due to its broadness. E.g. "effecting the method of claim 1..." is used inappropriately because it is too broad.

Claim 21 is rejected for reasons of at least those recited above.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless ---

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1, 4, 5, 10,13,14,15,19 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Stinson (Stinson, Michael K., US Patent No. 6,493,556 B1).

Regarding claim 1, Stinson teaches of a method of cost-sensitive (e.g., "most economical path" column 3, lines 37-39) control of data transfer between a mobile entity and a data network through a cellular radio infrastructure (figure 1), the method involving carrying out the following steps at a service system (figure 2) connected to the data network (figure 1, items 100 and 105), (a) receiving a transfer descriptor indicative of, at least in general terms the end points of a required data transfer, and of transfer criteria (e.g., "indicator"; column 2, lines 18-20), comprising at least a cost criterion, to be met by the data transfer (column 3, lines 7-11); (b) determining whether and, if so, how, the data transfer can be effected within the transfer criteria (e.g., "suitable communications path"; column 5, lines 35-40); (c) where step (b) produces a positive determination, instructing initiation of the data transfer in accordance with that determination (e.g., "path is selected"; column 5, lines 42-45).

Regarding claim 4, Stinson teaches all the limitations according to claim 1. Stinson also teaches where the cost criterion specifies that the data transfer is to be

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effected at lowest cost consistent with the other transfer criteria, if any (column 8, lines 7-10).

Regarding claim 5, Stinson teaches all the limitations according to claim 1. In addition, Stinson teaches where the cost criterion comprises a delay-dependent cost function for which the acceptable delay before transfer can be effected decreases with the maximum acceptable cost for the transfer, step (b) serving to determine the lowest cost at which the data transfer can be effected within a delay acceptable for that cost according to said cost function (where "delay" is described as "latency"; column 3, lines 13-17).

Regarding claim 8, Stinson teaches all the limitations according to claim 1. In addition, Stinson teaches where the transfer criteria further comprise at least one of a minimum transfer bit rate and a maximum delay before transfer initiation (where "channel bandwidth" allocation depends on the "rate"; columns 2 and 3, lines 66-68 and 1-3, respectively).

Regarding claim 10, Stinson teaches all the limitations according to claim 1. In addition, Stinson teaches where step (b) involves accessing tariff data for the cellular radio infrastructure, the tariff data being available through at least one of the following mechanisms: fetched as needed over the data network from a tariff server (figure 1, item 210); provided by the infrastructure in response to a specific enquiry detailing the data transfer (column 4, lines 32-38).

Regarding claim 13, Stinson teaches all the limitations according to claim 1. In addition, Stinson teaches where step (b) involves considering more than one cellular

radio infrastructure for effecting the transfer and selecting the infrastructure that provides the lowest-cost fit with the transfer criteria (column 4, lines 1-5).

Regarding claim 14, Stinson teaches all the limitations according to claim 1. In addition, Stinson teaches, where step (b) involves considering multiple data transfer service providers for effecting the transfer and selecting the service provider that provides the lowest-cost fit with the transfer criteria (lines 5-11 of the abstract).

Regarding claim 15, Stinson teaches all the limitations according to claim 1. In addition, Stinson teaches, where step (b) involves considering more than one cellular radio infrastructure for effecting the transfer and carrying out an auction between the infrastructures to determine which infrastructure is to be used (column 4, lines 32-38).

Regarding claim 18, Stinson teaches all the limitations according to claim 1. In addition, Stinson teaches, where step (c) involves the service system contacting the infrastructure to initiate data transfer set up by the infrastructure in accordance with the determination effected in step (b) (column 3, lines 42-54).

Regarding claim 19, Stinson teaches all the limitations according to claim 1. In addition, Stinson teaches, where step (c) involves the service system effecting the data transfer through itself including by setting up a data transfer path with the mobile entity through the cellular radio infrastructure in accordance with the determination made in step (b). (column 3, lines 55-67).

Regarding claim 22, Stinson teaches all the limitations according to claim 1. Moreover, Stinson teaches, of a service system with means for effecting each of the method steps of claim 1 (column 2, lines 13-20).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 3, 6, 7, 8, 9, 11, 12, 16, 17, 18, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stinson (Stinson Michael K., US Patent No. 6,493,556 B1) in view of Shaffer (Shaffer, Shmuel, EP No. 0,848,560 A2; Applicant's submitted art).

Regarding claim 2, Stinson teaches all the limitations according to claim 1. In further art, Shaffer teaches where the transfer descriptor complies with one of the following: the transfer descriptor is supplied by a network-connected resource and concerns downloading of data from a mobile entity; the transfer descriptor is supplied by a network-connected resource and concerns uploading of data to a mobile entity (e.g., it is well known in the art that an "internet interface" allows the "upload" and "download" of data; figure 1, item 12).

Regarding claim 3, Stinson teaches all the limitations according to claim 1. Stinson does not specifically teach where the cost criterion sets a maximum cost for effecting the data transfer. In related art concerning quality of service at or below a threshold cost, Shaffer teaches where the cost criterion sets a maximum cost for effecting the data transfer (column 15, lines 11-14).

Regarding claim 6, Stinson teaches all the limitations according to claim 1. In further art, Shaffer teaches where the cost criterion comprises a set of cost functions for each of which the acceptable delay before transfer can be effected decreases with the maximum acceptable cost for the transfer successive cost functions of the set, other than a first cost function, having higher maximum acceptable cost for a given delay than a preceding cost function of the set (where "delay" is comprised in the "quality of service"; columns 15 and 16; lines 54-58 and 1-5), step (b) using each cost function in succession, starting with said first cost function, until a positive determination is made for effecting the data transfer at a cost which is within the function currently being used, this cost being the lowest cost at which the data transfer can be effected within a delay acceptable for that cost according to said cost function (column 16, lines 1-9).

Regarding claim 7, Stinson teaches all the limitations according to claim 1. Shaffer further teaches where the transfer descriptor indicates that the data transfer is to be repeated according to a predetermined schedule, the method involving repeating steps (b) and-(c) for that transfer descriptor according to said schedule (columns 11 and 12; lines 56-58 and 1-14, respectively).

Regarding claim 9, Stinson teaches all the limitations according to claim 1. Shaffer further teaches where the transfer descriptor references a predetermined set of transfer criteria accessible to the service system (column 12, lines 43-47).

Regarding claim 11, Stinson teaches all the limitations according to claim 1. In addition, Shaffer teaches where step (b) involves a negotiation conducted between the service system and a server representing the infrastructure (column 2, lines 46-49).

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Regarding claim 12, Stinson teaches all the limitations according to claim 1. In addition, Shaffer teaches where step (b) involves specifying the required data transfer and the transfer criteria to a server representing the infrastructure and receiving back an indication of whether the infrastructure can effect the transfer as specified (column 5, lines 20-22).

Regarding claim 16, Stinson teaches all the limitations according to claim 1. In further art, Shaffer teaches where step (b) involves considering both current and future data-transfer tariffs (columns 11 and 12; lines 56-58 and 1-11, respectively).

Regarding claim 17, Stinson in view of Shaffer teaches all the limitations according to claim 1. In addition, Shaffer teaches where step (c) involves sending a message to one endpoint of the data transfer specifying the set up of data transfer by that endpoint in accordance with said determination effected in step (b) (column 12, lines 12-15).

Regarding claim 20, Stinson teaches all the limitations according to claim 1. In further art, Shaffer teaches where the data transfer concerns a transfer of data to the mobile entity, the data to be transferred being passed to the service system along with the transfer descriptor where it is temporarily stored, step (c) involving initiating a transfer to the mobile entity, of the data temporarily stored at the service system (column 5, lines 8-20).

Regarding claim 21, Stinson teaches all the limitations according to claim 1. In further art, Shaffer teaches of an apparatus of effecting real-time regulation of data traffic through a cellular radio infrastructure, comprising the steps of (column 5, lines 48-

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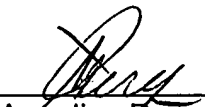
50): (i) - effecting traffic-dependent changes to the tariff structure for data transfer through the infrastructure and making the current tariff structure accessible over to a data network (column 6, lines 43-50); and the limitations for (ii) have been addresses in claim 1 and step (i) above.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angelica Perez whose telephone number is 703-305-8730. The examiner can normally be reached on 7:15 a.m. - 3:45 p.m., Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned is 703-872-9314 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.


Angelica Perez
(Examiner)



Nay A. Maung
(SPE)

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December 1, 2003